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**Roland Bartl**

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**From:** Dore' Hunter  
**Sent:** Tuesday, March 01, 2005 11:38 AM  
**To:** Planning Board  
**Cc:** Manager Department; Board of Selectmen  
**Subject:** Draft ATM Warrant Articles BA and BB - Amateur Radio Operators Antennas

Lauren,

This is a message to bring you and your Board up to date in regard to last night's developments in regard to a proposed zoning by-law change which will probably appear on the ATM Warrant, and to request a time on your Tuesday, 8 March meeting Agenda when I might appear at your meeting to discuss the matter outlined below. This message is, of course, not intended to start an email dialog that would be in violation of the Open Meeting Law.

As I anticipated might be the case when I spoke with you by telephone yesterday, the Board of Selectmen at our draft Warrant review session last night determined that it will support the version of the proposed amendment to the zoning regulations for amateur radio operators antenna towers which has been proposed by Town Counsel, draft Warrant Article BB. My Board opposes the abandonment of any antenna regulation effectively proposed in draft Warrant Article BA for reasons I will outline at your meeting.

It is, of course, unusual for our Boards to disagree on the text of a proposed amendatory zoning Warrant Article, but it is also unusual for us exempt from zoning regulation something over which we can exert at least some limited control, and which foreseeably might be of real concern to residential and other abutters. Clearly therefore this is a situation where a further public discussion is most desirable and the available time is quite short. I understand that the Planning Board next meets on the evening of Tuesday, 8 March. Selectmen have two other meetings they are involved in that evening, and one Board member will be out of town. However, another Selectman can cover the Finance Committee's formal budget hearing during the time it will take me to appear before your Board that evening.

Please put me on your 8 March Agenda and give me your best estimate of the time at which I should appear.

Regards,  
Dore' Hunter  
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3/1/2005

**DRAFT ZONING ARTICLE B1A**  
(Two-thirds vote)

**AMATEUR RADIO INSTALLATION**

To see if the Town will vote to amend the zoning bylaw as follows:

A. Insert under section 3.2 – General Uses, a new use definition as sub-section 3.2.4 as follows:

3.2.4 Amateur Radio Installation – One or more antennas or antenna STRUCTURES for the exclusive use by an amateur radio operator with a valid and current amateur radio operator's license issued by the Federal Communications Commission, provided that no antennas and antenna STRUCTURES shall be located in the front yard of a principal BUILDING as defined in Section 5.2.4.

B. Insert under section 3 – Table of Principal Uses, a new line 3.2.4 as follows:

		RESIDENTIAL DISTRICTS					VILLAGE DISTRICTS					OFFICE DISTRICTS	
PRINCIPAL USES		R-2 R-8 R-10	R-4 R-8/4 R-10/8	R-A	R-AA	VR	EAV	EAV-2	NAV	SAV	WAV	OP-1	OP-2
<b>3.2 GENERAL USES</b>													
3.2.4	Amateur Radio Installation	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

		BUSINESS DISTRICTS			INDUSTRIAL DISTRICTS					SP. DIST.	
PRINCIPAL USES		KC	LB	PM	GI	LI	LI-1	SM	TD	ARC	SITE PLAN
<b>3.2 GENERAL USES</b>											
3.2.4	Amateur Radio Installation	Y	Y	Y	Y	Y	Y	Y	Y	Y	NR

C. Delete section 3.10.3 – Applicability of Special Requirements for Wireless Communication Facilities, and replace it with a new section 3.10.3 as follows:

3.10.3 Applicability – This section 3.10 shall apply only to reception and transmission facilities for the purpose of personal wireless communication services identified in the Federal Telecommunications Act of 1996. Nothing in this Bylaw shall be construed to regulate or prohibit customary installations for the reception of wireless communication signals at home or business locations, and nothing in this Bylaw shall be construed to regulate or prohibit antennas or antenna STRUCTURES installed solely for use by a federally licensed amateur radio operator.

*[Note: Section 3.10.3 currently states as follows:*

*3.10.3 Applicability – This section 3.10 shall apply only to reception and transmission facilities for the purpose of personal wireless communication services identified in the Federal Telecommunications Act of 1996. Nothing in this Bylaw shall be construed to regulate or prohibit customary installations for the reception of wireless communication signals at home or business locations, and nothing in this Bylaw shall be construed to regulate or prohibit an antenna installed solely for use by a federally licensed amateur radio operator, provided that the height of such antenna does not exceed applicable height limitations and, if freestanding,*

*that it is set back from all LOT lines at least the distance equal to its height, but not less than the otherwise applicable minimum yard requirement.]*

- D. In section 4.3.6.3 – Treatment and Renovation of Runoff, add the following sentence at the end of the section:

“This section shall not apply to Amateur Radio Installations.”

*[Note: Section 4.3.6.3 currently reads:*

*4.3.6.3 Treatment and Renovation of Runoff – All water runoff from IMPERVIOUS COVERS shall be funneled into gas trap catch basins. In addition, the first (1st) inch of every storm event shall be directed into a retention pond(s), where it shall be retained for an average of at least 3 days prior to recharge into the ground or discharge from the site. The retention pond(s) shall be exposed to sunlight, vegetated, and lined with soil featuring a permeability of 0.0001 cm/sec (0.1417 in/hr) or less. A DIVERSION BOX shall direct all water, which falls onto the site in excess of one (1) inch during a single storm event, toward additional storage, direct infiltration, or discharge from the site. Alternate methods of runoff treatment and renovation may be approved by the Special Permit Granting Authority if the Special Permit Granting Authority determines the intent of this Section is met.]*

- E. Insert in section 8 – Nonconforming Lots, Uses, Structures, and Parking; Exemptions; a new sub-section 8.10 as follows:

8.10 Exemption for Amateur Radio Installations – The limitations of this Zoning Bylaw pertaining to the height of BUILDINGS and STRUCTURES and the requirements for a minimum number of parking spaces in Section 6.3 shall not apply to Amateur Radio Installations as defined in Section 3.2.4.

- F. Insert in section 9B.4 – Allowed Uses in a Senior Residence Development, a new subsection 9B.4.9 as follows:

9B.4.9 Amateur Radio Installations.

, or take any other action relative thereto.

### SUMMARY

Amateur radio operators, or “hams”, communicate with other stations nearby and all over the world. The ability to communicate both over long and short distances increases with the height of an antenna above the ground. Federal and State governments recognize hams for providing vital communications in the event of emergency or disaster.

This article establishes “amateur radio installation” as a new principal use category allowed in every zoning district and provides certain exemptions for their antennas and antenna structures including an exemption from the otherwise applicable height limitations of the Acton Zoning Bylaw. The article would prohibit the placement of antennas and antenna structures in the front yards of buildings. Standard setback requirements from the lot lines would apply.

Federal Communications Commission (FCC) regulations state: “... local regulations which involve placement, screening or height of antennas and antenna structures based on health, safety, or aesthetic considerations must be crafted to accommodate reasonably amateur communications, and to represent the minimum practical regulation to accomplish the local authority’s legitimate purpose” (47 C.F.R. §97.15(e)); and “a station antenna structure may be erected at heights and dimensions sufficient to accommodate amateur service communications. State and local regulations

of a station antenna structure must not preclude amateur service communications. Rather, it must reasonably accommodate such communications and must constitute the minimum practicable regulation to accomplish the State or local authority's legitimate purpose" (47 C.F.R. §97.15(b)). In further clarifications of its Rules, the FCC did not consider it a legitimate local government action to seek a balance between local interest and the needs of an amateur radio operation to achieve effective communications. Rather, the FCC has placed the interest of the amateur radio operator above that of the community and expects the least local regulation necessary for the welfare of the community to accommodate the needs of the amateur radio operators to engage in amateur radio communications. This article reflects the reality of FCC rules, which elevate effective amateur radio operations to a vital national interest and largely preempt local control.

Direct inquiries to: Roland Bartl, AICP, Town Planner  
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Selectman assigned: -: bos@acton-ma.gov

**Board of Selectmen:**  
**Finance Committee:**  
**Planning Board:**

To see if the Town will vote to amend the zoning bylaw as follows:

A. Insert under section 3.8.3 – Accessory Uses permitted in any Zoning District, a new sub-section 3.8.3.6 as follows:

3.8.3.6 Not more than one Amateur Radio Tower on a LOT, inclusive of all antennas, appurtenances, support STRUCTURES, anchors, and guys, subject to the following requirements:

- a) The Tower shall be owned and operated by an amateur radio operator who is licensed by the Federal Communications Commission (FCC).
- b) The operator of the Tower or the owner of the LOT shall dismantle and remove the Tower within 60 days after the cessation of the FCC-licensed operator's ownership or tenancy, or the expiration or rescission of the operator's FCC license.
- c) The Tower height shall not exceed 80 feet from ground level when fully extended, including all antennas and appurtenances.
- d) A Tower is prohibited in the front yard of the principal BUILDING or BUILDINGS on the LOT as defined in section 5.2.4.
- e) In Residential Districts, a Tower shall be set back at least 30 feet from all side and rear LOT lines regardless of the otherwise applicable yard requirements, except when:
  - i. The Tower, even when extended, does not exceed the maximum height limit for STRUCTURES; or
  - ii. The tower is directly attached to the side or rear of the principal BUILDING or BUILDINGS on the LOT and complies with the minimum side and rear yard requirements for STRUCTURES.

Anchors and guys must in all cases only comply with the minimum side and rear yard requirements that are otherwise applicable to STRUCTURES.

- f) The base of the Tower shall be surrounded by a fence with a locked gate or shall be equipped with an effective anti-climb device.
- g) No portion of the Tower shall be utilized as a sign or have signage attached to it.
- h) No portion of the Tower shall be illuminated or have lights attached to it.
- i) The Board of Appeals may, by special permit, on a case-by-case basis, allow more than one Amateur Radio Tower on a LOT (3.8.3.6.a), an Amateur Radio Tower height higher than 80' (3.8.3.6.c), and/or a set back of less than 30 feet from side and/or rear LOT lines (3.8.3.6.e) where such relief is demonstrated by the applicant to be necessary to reasonably and effectively accommodate amateur radio communications by the federally licensed amateur radio owner/operator of the Amateur Radio Tower, where such relief would not pose a substantial health, safety, or aesthetic problem to the neighborhood in the vicinity of the Amateur Radio Tower, and where denial of such special permit relief would otherwise result in a demonstrated violation of applicable Federal Communications Commission (FCC) regulations and/or Massachusetts General Law Ch. 40A, S. 3.

- B. Delete section 3.10.3 – Applicability of Special Requirements for Wireless Communication Facilities, and replace it with a new section 3.10.3 as follows:

3.10.3 Applicability – This section 3.10 shall apply only to reception and transmission facilities for the purpose of personal wireless communication services identified in the Federal Telecommunications Act of 1996. Nothing in this Bylaw shall be construed to regulate or prohibit customary installations for the reception of wireless communication signals at home or business locations, and nothing in this Bylaw shall be construed to regulate or prohibit a tower or antenna installed solely for use by a federally licensed amateur radio operator. For regulations on Amateur Radio Towers see section 3.8.3.6 of this Bylaw.

*[Note: Section 3.10.3 currently states as follows:*

*3.10.3 Applicability – This section 3.10 shall apply only to reception and transmission facilities for the purpose of personal wireless communication services identified in the Federal Telecommunications Act of 1996. Nothing in this Bylaw shall be construed to regulate or prohibit customary installations for the reception of wireless communication signals at home or business locations, and nothing in this Bylaw shall be construed to regulate or prohibit an antenna installed solely for use by a federally licensed amateur radio operator, provided that the height of such antenna does not exceed applicable height limitations and, if freestanding, that it is set back from all LOT lines at least the distance equal to its height, but not less than the otherwise applicable minimum yard requirement.]*

Or take any other action relative thereto.

### SUMMARY

Amateur radio operators, or “hams”, communicate with other stations nearby and all over the world. Federal and State government recognize hams for providing vital communications in the event of emergency or disaster. The ability to communicate both over long and short distances increases with the height of an antenna above the ground. A low antenna height can be partially compensated for by boosting power. High power stations with low antenna heights have an increased likelihood to interfere with neighbors’ telephones, televisions, VCRs, and audio equipment. Generally, one or more antennas are mounted to a support tower to achieve the desired height.

This article establishes standards for amateur radio transmission towers. Amateur radio towers would be limited to 80 feet in height including any top-mounted antennas, and their location would be limited to side and rear yards. In residential districts, a special 30-foot side and rear yard setbacks would be required for freestanding towers that exceed the otherwise applicable height limit.

Federal Communications Commission (FCC) regulations state: “... local regulations which involve placement, screening or height of antennas and antenna structures based on health, safety, or aesthetic considerations must be crafted to accommodate reasonably amateur communications, and to represent the minimum practical regulation to accomplish the local authority’s legitimate purpose” (47 C.F.R. §97.15(e)); and “a station antenna structure may be erected at heights and dimensions sufficient to accommodate amateur service communications. State and local regulations of a station antenna structure must not preclude amateur service communications. Rather, it must reasonably accommodate such communications and must constitute the minimum practicable regulation to accomplish the State or local authority’s legitimate purpose” (47 C.F.R. §97.15(b)). Massachusetts General Law provides in Ch. 40A, S. 3 the following: “No zoning ordinance or by-law shall prohibit the construction or use of an antenna structure by a federally licensed amateur radio operator. Zoning ordinances and by-laws may reasonably regulate the location and height of such antenna structures for the purposes of health, safety, or aesthetics; provided, however, that

such ordinances and by-laws reasonably allow for sufficient height of such antenna structures so as to effectively accommodate amateur radio communications by federally licensed amateur radio operators and constitute the minimum practicable regulation necessary to accomplish the legitimate purposes of the city or town enacting such ordinance or by-law.”

Presently, Acton allows amateur radio towers by right if their height does not exceed the standard limits for buildings and structures – 36 to 40 feet depending on zoning district. A recent Massachusetts Superior Court decision (*Chedester v. Town of Whately*, November 24, 2004) held that Whately’s 35-foot standard height limit is inconsistent with Federal Code and State Law, overruled the Whately Board of Appeals, and ordered the Town of Whately to issue a building permit for a 140-foot high tower.

This article proposes an overall height limit of 80 feet. This accommodates most commercially available amateur radio towers, and is adequate for reasonably efficient amateur radio operations in Acton’s moderate topography.

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